HYGIENE AND PUBLIC HEALTH

UNDER THE CHARGE OF
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Flies and Disease.

Surgeon-General Sir William Moore (*Medical Magazine*, July, 1893) regards the dissemination of diseases by flies as a matter looked upon with too much indifference, and instances an epidemic of anthrax which was spread by flies which had covered the carcass of a dog thrown into a ditch in Cortal. He quotes the experiments of Sawtschenko with flies and cholera germs, and observes that it is worth noticing that in India it is during the time and season of the greatest prevalence of cholera that flies most abound. The possibility of flies carrying the organisms of typhoid and phthisis is suggested, and the belief is expressed that leprosy is often conveyed by flies which appear to be particularly fond of leprous sores and of investigating anything in the way of a sore on a healthy person.

There is no doubt that ophthalmia is so spread, and an instance is given of complete destruction of an eye from diphtherial inflammation following a sting in the eye by a fly which had apparently risen from a dunghill. That venereal disease is not more frequently disseminated by flies is probably explainable by the fact that the sores are usually on unexposed parts of the body.

Action of Cold on Cholera Bacilli.

An outbreak of cholera occurred in the insane asylum at Nietleben, in the beginning of 1893, at a time when the temperature was twenty degrees and more below zero, Centigrade, and all the rivers were frozen. To determine whether the bacilli would die or be preserved in the ice, a series of experiments was undertaken by Prof. Renk, of Halle (*Fortschritte der Medicin*, May 15, 1893). Water from the Saale was sterilized, cooled, inoculated with cholera germs, and frozen; the ice being finally melted, and cultures made. In the first experiment each c.cm. of water contained, after inoculation, 620,000 organisms. The flask was frozen at — 9.6° C., and exposed to that temperature thirty-nine hours. The cultures made from the melted ice were negative in results. A second test with more richly inoculated water kept in a freezing mixture of ice and salt, gave negative results after one day. Sterilized water so inoculated that each cubic centimetre contained countless bacteria, was frozen, and cultures made from the melted ice after forty-eight and ninety-six hours. After forty-eight hours of exposure each cubic centimetre of melted ice yielded 24,400 organisms, but after ninety-six hours the results were negative in each of twelve tests. Experiments were undertaken with unsterilized Saale water to determine the influence, if any, of the presence of spaltpilze. A number of bottles of the water so inoculated as to contain 1,483,000 organisms to the cubic centimetre were frozen, and on each following day one bottle was taken, the ice therein melted and examined, then re-frozen. It was found that after five days of uninterrupted freezing all the bacilli are killed, and after six and seven days when the freezing is interrupted. The conclusion is that cholera bacilli cannot develop after being in ice eight days.

UFFELMANN (*Berliner klinische Wochenschrift*, 1893, No. 7) had already begun experiments in the same direction before the outbreak occurred at Nietleben, and was able to utilize the intense cold of January. His results show that cholera bacilli have considerable power to withstand cold and that they succumb only after a certain time, the duration of vitality being seemingly dependent on the degree of cold. There seems to be no essential difference in the behavior of entirely fresh or older cultures of the bacilli.

DIPHTHERIA IN LOMBARDY.

DR. FRANCO MISSAGLIA (*Giornale della Reale Società Italiana d'Igiene*, July, 1893), reporting the results of his investigation of an outbreak of diphtheria in Sommo, Lombardy, during the summer and autumn of 1892, states that the spread of the disease is largely due to the prejudices of the people, who conceal sickness, disobey the physician, and throw away his medicines. Among other circumstances highly favorable to the spread of the disease, he mentions the direct contact of children, who, living in common, easily transmit the infecting bacillus; the indirect contact by means of mothers, of female neighbors, and of domestic utensils; the spitting on the floor, or on sheets and counterpanes not subsequently washed; insufficient means of disinfection; washing of clothes of the infected in water which afterward becomes a focus of disease; absence of cleanliness; and bad drinking-water.

LEPROSY IN INDIA.

THE conclusions of the Leprosy Commission (*Indian Medico-Chirurgical Review*, July, 1893) are that leprosy is a disease *sui generis*, not diffused by hereditary transmission; it must be regarded as contagious and inoculable, yet the extent to which it is propagated by these means is exceedingly small. It is not directly originated by the use of any particular article of food, nor by any climatic or telluric conditions, nor by insanitary surroundings; neither does it affect any race or caste. It is indirectly influenced by insanitary surroundings, such as poverty, bad food, and deficient drainage and ventilation, which cause a predisposition and increase the susceptibility of the individual. In the great majority of cases, it originates from a sequence of concurrence of causes and conditions related to each other in ways imperfectly known. Complete segregation has never yet been possible; in India it is absolutely impracticable. The commission are of opinion that the sale of articles of food and drink by lepers should be prohibited, and that they should be prevented from practising prostitution, and from following such occupations as those of barber and washerman.